



# **Instruction Manual**

## **4255 7" Angle Grinder**

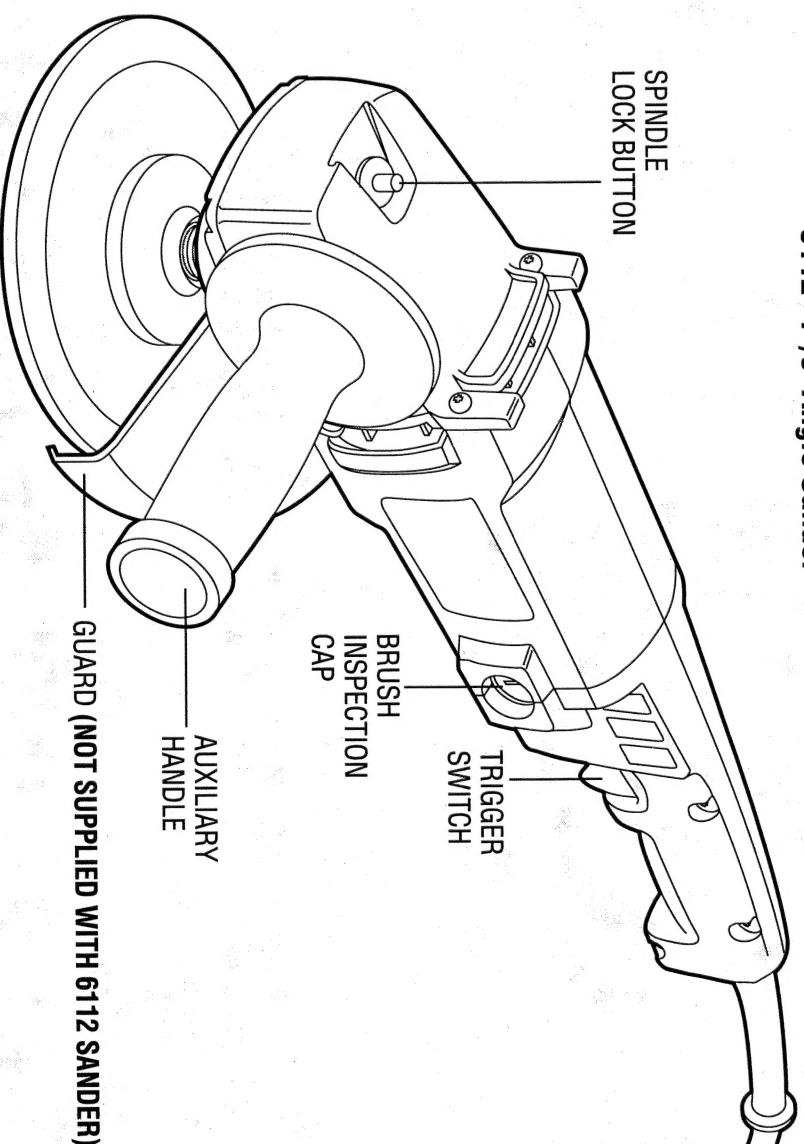
## **6112 7"/9" Angle Sander**

## Getting the most out of your tool.

Please take time to read this manual and pay particular attention to the safety rules we've provided for your protection. Don't forget to send in your owner's registration card. If you have any questions about your tool please call:

**1-800-9-BD TOOL**  
**(1-800-923-8665)**

**4255 7" Angle Grinder**  
**6112 7"/9" Angle Sander**



# FOR YOUR SAFETY - ALL TOOLS

## Important Safety Instructions

**WARNING:** When using electric tools, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following:

### READ ALL INSTRUCTIONS

## Double Insulation

Double insulated tools are constructed throughout with two separate layers of electrical insulation or one double thickness of insulation between you and the tool's electrical system. Tools built with this insulation system are not intended to be grounded. As a result, your tool is equipped with a two prong plug which permits you to use extension cords without concern for maintaining a ground connection.

**NOTE:** Double insulation does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

**CAUTION:** WHEN SERVICING USE ONLY IDENTICAL REPLACEMENT PARTS. Repair or replace damaged cords.

## Polarized Plugs

Polarized plugs (one blade is wider than the other) are used on equipment to reduce the risk of electric shock. When provided, this plug will fit into a polarized outlet only one way. If the plug does not fit fully into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

## Safety Instructions For All Tools

- **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
- **CONSIDER WORK AREA ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit. Do not use tool in presence of flammable liquids or gases.
- **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, and refrigerator enclosures.
- **KEEP CHILDREN AWAY.** Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
- **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place — out of reach of children.
- **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
- **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended.
- **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- **USE SAFETY GLASSES.** Also use face or dust mask if operation is dusty.
- **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
- **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
- **DON'T OVERREACH.** Keep proper footing and balance at all times.
- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.

- **DISCONNECT OR LOCK OFF TOOLS** when not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
- **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- **AVOID UNINTENTIONAL STARTING.** Don't carry tool with finger on switch. Be sure switch is off when plugging in.
- **EXTENSION CORDS.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

| Minimum Gage for Cord Sets |                              |        |         |                 |
|----------------------------|------------------------------|--------|---------|-----------------|
| Volts                      | Total Length of Cord in Feet |        |         |                 |
| 120V                       | 0-25                         | 26-50  | 51-100  | 101-150         |
| 240V                       | 0-50                         | 51-100 | 101-200 | 201-300         |
| Ampere Rating              |                              |        |         |                 |
| More Than                  | Not more Than                |        | AWG     |                 |
| 0                          | -                            | 6      | 18      | 16              |
| 6                          | -                            | 10     | 18      | 16              |
| 10                         | -                            | 12     | 16      | 14              |
| 12                         | -                            | 16     | 14      | 12              |
|                            |                              |        |         | Not Recommended |

- **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
- **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.

## Additional Safety Instructions for Grinders

- **ALWAYS WEAR EYE PROTECTION.**
- **KEEP GUARDS IN PLACE.**
- Use only grinding wheels having a maximum operating speed at least high as "No Load RPM" marked on the tool's nameplate.
- Before using, inspect recommended accessory for cracks or flaws. If such a crack or flaw is evident, discard the accessory. The accessory should also be inspected whenever you think the tool may have been dropped.
- When starting the tool (with a new or replacement wheel installed) hold the tool in a well protected area and let it run for one minute. If the wheel has an undetected crack or flaw, it should burst in less than one minute. Never start the tool with a person in line with the wheel. This includes the operator.
- In operation, avoid bouncing the wheel or giving it rough treatment. If this occurs, stop the tool and inspect the wheel.
- **ALWAYS USE GUARDS** with depressed center wheels or flaring cup grinding wheels.
- Clean your tool out periodically.
- **CAUTION:** Some wood contains preservatives such as copper chromium arsenate (CCA) which can be toxic. When sanding these materials extra care should be taken to avoid inhalation and minimize skin contact.

## SAVE THESE INSTRUCTIONS

### Motor

Your B&D tool is powered by a B&D built motor. Be sure your power supply agrees with the nameplate marking. Voltage decrease of more than 10% will cause loss of power and overheating. All B&D tools are factory tested; if this tool does not operate, check the power supply.

### Switch

To start the tool, squeeze the trigger switch shown in Figure 1. To turn the tool off, release the switch. The tool can be locked on for continuous use by holding the trigger switch depressed while you depress the switch locking button next to the trigger, shown in Figure 1. Hold the locking button in as you gently release the trigger. Release the locking button and the tool will continue to run. To turn the tool off from a locked on condition, squeeze and release the trigger once.

### Auxiliary Handle

An auxiliary handle is provided with your tool for convenience. The handle can be screwed into either side of the gear case, shown in Figure 2, and should be used at all times when sanding or grinding.

Figure 1

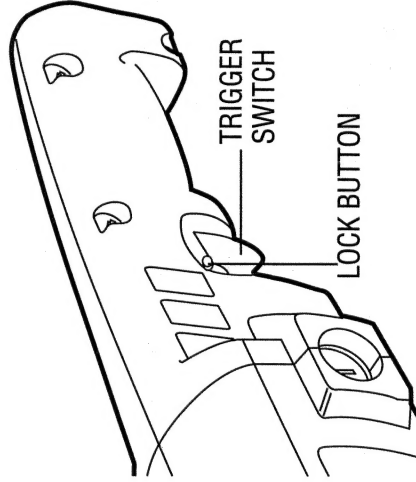
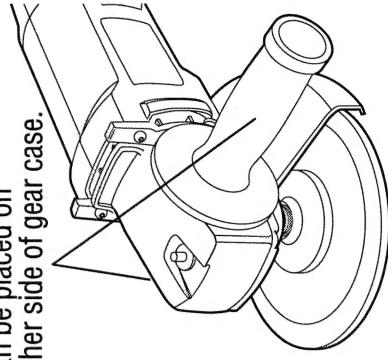


Figure 2

### AUXILIARY HANDLE

Can be placed on either side of gear case.



## Spindle Lock Button

Turn off and unplug tool. In order to prevent the spindle of the unit from rotating while installing or removing accessories, a spindle lock button has been provided in the gear head of the machine. Depress spindle lock button and rotate the spindle until the lock pin engages to lock the spindle.

**NEVER DEPRESS THE SPINDLE LOCK BUTTON WITH THE TOOL RUNNING OR COASTING.**

## Sanding With Abrasive Discs (Figure 3)

**To install sanding discs:**

1. TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.
2. Push the hub of the disc nut through the center of the sanding disc, as far as it will go, and also through the backing disc.
3. Put the assembled discs on the tool spindle and engage the disc nut into the disc nut hub.
4. Thread the assembly clockwise, completely down on the spindle.
5. Engage the lock button to lock the spindle in place.

When using a sanding disc, hold the tool at an angle of 10°-15° to the work. If only the outer edge of the sanding disc is used, a rough cut surface will result. If the sanding disc is pressed flat against the work, the surface will be irregular and bumpy, and the tool will be difficult to control.

**To remove disc:**

1. Engage spindle lock button to lock the spindle in place.
2. Using a cloth or glove to protect your hand, turn disc assembly counter-clockwise to remove it from the tool spindle. (Figure 4)

Figure 3

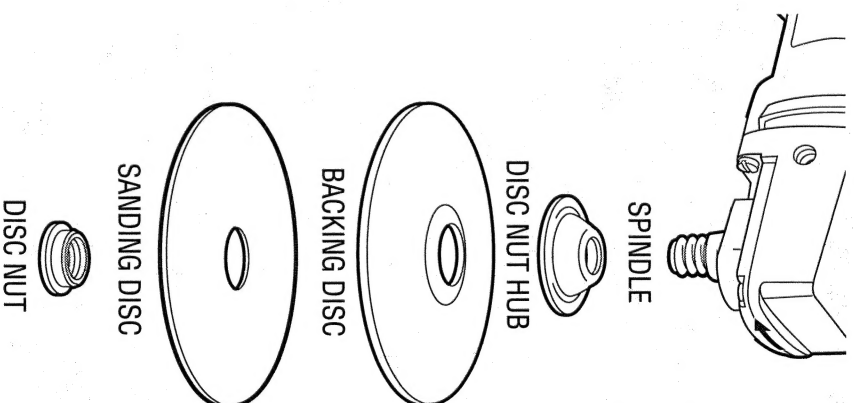
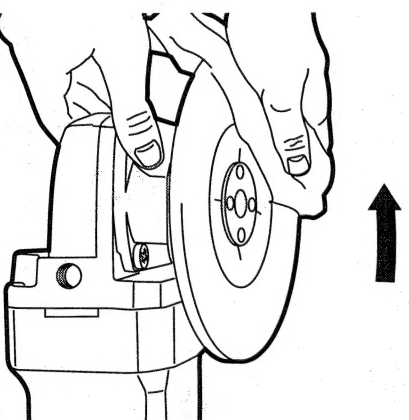
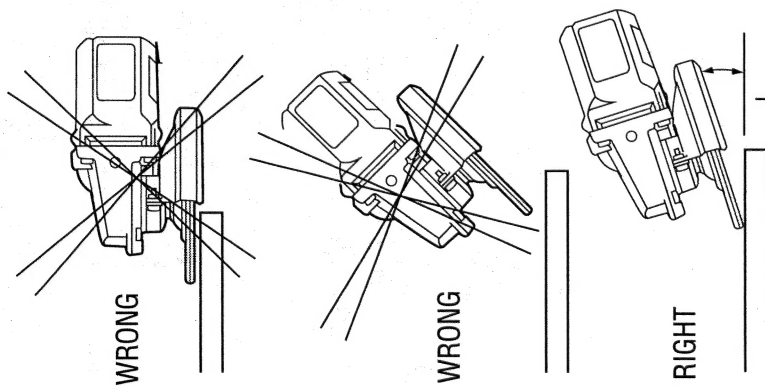


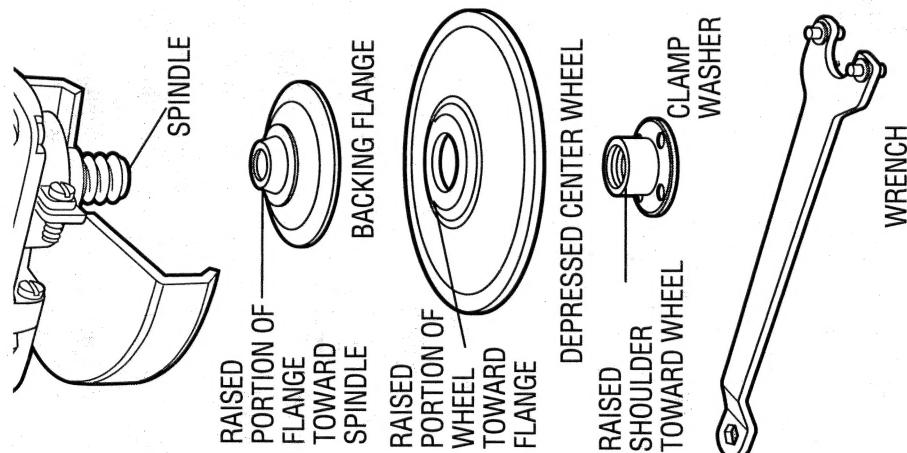
Figure 4



**Figure 5**



**Figure 6**



## Depressed-Center Wheels

Depressed center wheels may be used for moderate metal removal on flat or contoured surfaces. **CAUTION:** Never use depressed center wheels without the proper guard.

**To install depressed center wheels:** (See Figure 6)

1. TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.
  2. Be sure the guard assembly is securely attached to the spindle housing. Position guard so that the open part of the guard is facing away from the operator.
  3. Put the backing flange onto the tool spindle.
  4. Check rated speed on depressed center wheel. Never use wheel with rated speed lower than the speed in the "WARNING" statement on the nameplate of the tool.
  5. Place the depressed center wheel on the tool spindle.
  6. Thread the clamp washer on tool spindle, hold the tool spindle by engaging the lock button, and tighten clamp washer with wrench.
- When using a depressed center wheel, hold the tool so that an angle of approximately 30° exists between the wheel and the work. (See Figure 5)

## Wire Brushing

Common applications for wire cup brushes include cleaning welds, angles, corners and removal of paint.

1. Disconnect tool from power source. Rest grinder on its back with spindle facing up.
2. Ensure that the rated speed of the wire brush is equal to or higher than the rated speed of the grinder found on the nameplate.



3. Thread wire cup brush onto spindle and tighten.
4. Always wear eye protection and appropriate protective clothing.

### **Precautions To Take When Sanding Paint**

1. Sanding of lead based paint is **NOT RECOMMENDED** due to the difficulty of controlling the contaminated dust. The greatest danger of lead poisoning is to children and pregnant women.
2. Since it is difficult to identify whether or not a paint contains lead without a chemical analysis, we recommend the following precautions when sanding any paint:

#### **PERSONAL SAFETY**

- a. No children or pregnant women should enter the work area where the paint sanding is being done until all clean up is completed.
- b. A dust mask or respirator should be worn by all persons entering the work area. The filter should be replaced daily or whenever the wearer has difficulty breathing.

**NOTE:** Only those dust masks suitable for working with lead paint dust and fumes should be used. Ordinary painting masks do not offer this protection. See your local hardware dealer for the proper N.I.O.S.H. approved mask.

- c. **NO EATING, DRINKING or SMOKING** should be done in the work area to prevent ingesting contaminated paint particles. Workers should wash and clean up **BEFORE** eating, drinking or smoking. Articles of food, drink, or smoking should not be left in the work area where dust would settle on them.

#### **ENVIRONMENTAL SAFETY**

- a. Paint should be removed in such a manner as to minimize the amount of dust generated.
- b. Areas where paint removal is occurring should be sealed with plastic sheeting of 4 mils thickness.
- c. Sanding should be done in a manner to reduce tracking of paint dust outside the work area.

#### **CLEANING AND DISPOSAL**

- a. All surfaces in the work area should be vacuumed and thoroughly cleaned daily for the duration of the sanding project. Vacuum filter bags should be changed frequently.
- b. Plastic drop cloths should be gathered up and disposed of along with any dust chips or other removal debris. They should be placed in sealed refuse receptacles and disposed of through regular trash pick-up procedures. During clean up, children and pregnant women should be kept away from the immediate work area.
- c. All toys, washable furniture and utensils used by children should be washed thoroughly before being used again.



## Cleaning

Blowing dust and grit out of the motor housing using compressed air is a necessary regular maintenance procedure. Dust and grit containing metal particles often accumulate on interior surfaces and could create an electrical shock hazard if not frequently cleaned out. **ALWAYS WEAR SAFETY GLASSES.**

**CAUTION:** Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. Use clean, dry rag only.

## Lubrication

B&D tools are properly lubricated at the factory and are ready for use. Tools should be relubricated regularly every sixty days to six months, depending on usage. (Tools used constantly on production or heavy-duty jobs and tools exposed to heat may require more frequent lubrication.) This lubrication should only be attempted by trained power tool repairpersons, such as those at B&D service centers or in other qualified service organizations.

## Motor Brushes

Be sure tool is turned off and disconnected before inspecting brushes. Carbon brushes should be regularly inspected for wear. To inspect brushes, unscrew the plastic brush inspection caps (located in the sides of the motor housing) and the spring and brush assemblies may be withdrawn from the tool.

Keep brushes clean and sliding freely in their guides. Carbon brushes have varying symbols stamped into them, and if the brush is worn down to the line closest to the spring, they must be replaced. New brush assemblies are available at B&D service centers.

**NOTE:** Use accessories recommended per chart below:

| Accessory Type         | Notes  | Usage  |
|------------------------|--|--|
| DEPRESSED CENTER WHEEL | Use guard supplied with tool                     | Use for moderate metal and masonry removal on flat or contoured surfaces |
| SANDING DISCS          |  | Use for smoothing welds, and sharp edges, and automotive body work       |
| WIRE CUP BRUSHES       | Max - 4" Knotted Wheel<br>Max - 2-3/4" Cup Wheel | Use for rust removal and surface preparation before painting             |

Depressed center grinding wheels must fit within the confines of the guard and must be rated higher than the recommended speed as marked on the nameplate.

**CAUTION:** Strands of wire cup brushes may break and fly off while in use. Users and others in the area should wear adequate eye, face and body protection. Use only wire cup brushes that are rated at or greater than the RPM shown on the tool's nameplate.

**WARNING:** To reduce the risk of injury, always use proper guards when grinding and wear eye protection.

**CAUTION:** The use of any non-recommended accessory may be hazardous. Recommended accessories for use with your tool are available at extra cost from your distributor or local service center. A complete listing of service centers is included with your tool.

## **IMPORTANT!**

To assure product safety and reliability, particularly for double insulated tools, repairs, maintenance and adjustment (excluding maintenance described in this manual) should be performed by B&D service centers or authorized service centers, using identical B&D replacement parts.

Every B&D tool is of the highest quality.

If you wish to contact us regarding this product, please call toll free between 8:00am and 8:00pm ET, seven days a week:

**1-800-9-BD TOOL**  
(1-800-923-8665)

### **One Year Free Maintenance**

All B&D tools for Industry and Construction are covered under a service/safety check program where B&D will inspect your tool for safety and provide necessary maintenance or repairs, including normal wear and tear parts, for one year, FREE OF CHARGE.

### **Full Warranty**

All B&D tools for Industry and Construction are warranted to be free of any defects in materials or workmanship. Upon thorough examination of tool, B&D will repair or replace, at our option, any product that is determined to be defective.

### **Conditions**

The service/safety check and the warranty do not apply to: repairs made or attempted by anyone other than an authorized B&D service location; misuse, abuse, neglect, improper application of the tool; missing parts; or normal wear and tear (after first year of ownership). Please return the complete unit, transportation prepaid, to any B&D factory owned or B&D authorized service center location (list provided with tool or see Yellow Pages under "Tools Electric").

# YOUR POWER TOOLS MAY BE SERVICED AT THE FOLLOWING B&D SERVICE CENTERS.

|                       |   |              |
|-----------------------|---|--------------|
| <b>ALABAMA:</b>       | Birmingham 35209, 2412 Green Springs Hwy.....               | 205-942-0538 |
|                       | Mobile 36608, 3631 Airport Blvd.....                        | 205-343-6624 |
| <b>ALASKA:</b>        | Anchorage 99518, 910 West International Airport Rd.....     | 907-563-4664 |
|                       | Mesa 85202, 535 S. Dobson, Suite 7.....                     | 602-461-1074 |
| <b>ARIZONA:</b>       | Phoenix 85013, 4501 N. 7th Avenue.....                      | 602-279-6414 |
|                       | Tucson 85712, 4845 E. Speedway Blvd.....                    | 602-323-3388 |
| <b>ARKANSAS:</b>      | Little Rock 72201, 519 W. Seventh St.....                   | 501-372-3040 |
|                       | Chula Vista 91910, 309 Broadway.....                        | 619-420-6350 |
| <b>CALIFORNIA:</b>    | Concord 94520, 1500 Monument Blvd., #C2.....                | 510-682-4880 |
|                       | Fresno 93710, 5412 North Blackstone Ave.....                | 209-435-0810 |
| <b>CONNECTICUT:</b>   | Long Beach 90805, 2011 South St.....                        | 310-422-5825 |
|                       | Long Angeles 90040, 4820 South Eastern Ave., Suite "L"..... | 213-720-1834 |
| <b>FLORIDA:</b>       | Riverside 92506, 6215 Magnolia Ave., Suite "B".....         | 909-787-9700 |
|                       | Sacramento 95825, 2033 Fulton Ave.....                      | 916-972-9090 |
| <b>GEORGIA:</b>       | San Diego 92123, 9270 Claremont Mesa Blvd.....              | 619-279-2011 |
|                       | San Jose 95128, 1185 So. Bascom Ave.....                    | 408-293-7350 |
| <b>HAWAII:</b>        | San Leandro 94578, 15206 E. 14th St.....                    | 510-276-1610 |
|                       | San Nuyis 91411, 14920 Victory Blvd.....                    | 818-787-5531 |
| <b>ILLINOIS:</b>      | Denver 80219, 1171 S. Federal Blvd.....                     | 303-922-8325 |
|                       | Orange 06477, 481 Boston Post Rd.....                       | 203-795-3583 |
| <b>INDIANA:</b>       | Wethersfield (Hartford) 06109, 662 Silas Dean Hwy.....      | 203-563-5800 |
|                       | District of Columbia: Washington                            |              |
| <b>MISSOURI:</b>      | Colmar Manor 20722, 4153 Bladensburg Rd.....                | 301-779-3808 |
|                       | Falls Church, VA 22046, 344 W. Broad St.....                | 703-533-7313 |
| <b>NEBRASKA:</b>      | Fl. Lauderdale 33334, 799 E. Oakland Pk. Blvd.....          | 305-566-5102 |
|                       | Fl. Myers 33907, 5224 Bank Street.....                      | 813-278-1188 |
| <b>NEW JERSEY:</b>    | Jacksonville 32205, 920 Cassat Ave.....                     | 904-781-2253 |
|                       | Miami (North) 33168, 13345 N.W. Seventh Ave.....            | 305-681-6658 |
| <b>NEW MEXICO:</b>    | Miami (South) 33156, 12233 So. Dixie Hwy.....               | 305-232-9497 |
|                       | Orlando 32803, 3807 E. Colonial Dr.....                     | 407-894-7011 |
| <b>NEW YORK:</b>      | St. Petersburg 33709, 5635 49th St., N.....                 | 813-525-0273 |
|                       | Tampa 33609, 3432 W. Kennedy Blvd.....                      | 813-872-8317 |
| <b>OHIO:</b>          | West Palm Beach 33415, 310 South Military Trail.....        | 407-689-3247 |
|                       | Atlanta (South) 30349, 5330 Old National Hwy.....           | 404-762-8844 |
| <b>UTAH:</b>          | Smyrna 30080, 2550 Cobb Pkwy.....                           | 404-956-0869 |
|                       | Stone Mountain (Atlanta) 30086, 5723 Memorial Dr.....       | 404-292-4714 |
| <b>VIRGINIA:</b>      | Honolulu 96819, 330 Sand Island Access Road.....            | 808-847-7447 |
|                       | Des Plaines (Chicago) 60018, 1277 South Elmhurst Rd.....    | 708-364-5220 |
| <b>WASHINGTON:</b>    | Lincolnwood (Chicago) 60646, 6710 N. Crawford Ave.....      | 708-673-0923 |
|                       | Lisle (West Chicago) 60532, 2950 Ogden Ave., Unit H.....    | 708-717-1075 |
| <b>WEST VIRGINIA:</b> | Moline 61265, 4433 23rd Ave.....                            | 309-762-3000 |
|                       | Oak Lawn (Chicago) 60453, 6343 W. 95th St.....              | 708-423-7212 |
| <b>WISCONSIN:</b>     | Waukegan 60085, 39 S. Greenbay Rd.....                      | 708-249-4390 |
|                       | Evansville 47710, 307 First Ave., Crescent Cir.....         | 812-425-4269 |
| <b>MISSOURI:</b>      | Hammond 46323, 7103 Kennedy Ave.....                        | 219-845-5100 |
|                       | Indianapolis 46224, 5999 Crawfordsville Rd.....             | 317-243-8308 |

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**ALBERTA**

Edmonton T6E 6H6, 3845 99th St. .... 403-462-5005

**BRITISH COLUMBIA**

Vancouver V5M 3Y7, 1735 Boundary Rd. .... 604-291-9942

**MANITOBA**

Winnipeg R3H 0K3, 934 St. James St. .... 204-783-7294

**NOVA SCOTIA**

Halifax B3K 2A4, 6100 Young Street. .... 902-453-5090

**ONTARIO**

Brockville K6V 5W6, 100 Central Ave. .... 613-342-6641  
Kanata K2L 1V3, 462 Hazeldean Rd #11 ..... 613-831-2332

**Glencairn Plaza**

London N6E 3A9, 981 Wellington Rd #6 ..... 519-649-2407  
Markham L3P 3J3, 9275 Hwy 48 Unit 12/13 ... 905-472-6168  
Mississauga L4X 1L3, 1480 Dundas St. E #7. 905-277- 0011  
North York M3J 3G5, 48 Kodiak Cres ..... 416-635-6740

**QUEBEC**

Brossard J4W 1M6, 5840 Boul Taschereau ... 514-462-4881  
Montreal H1Y 1B4, 3061 Belanger ..... 514-722-1021

**FOR ADDITIONAL SERVICE LOCATIONS**

**CALL: 1-800-9- BD TOOL**

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**Black & Decker (U.S.) Inc. • 701 East Joppa Road, Towson, Maryland 21286**

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